

Listing of Claims:

This listing of claims reflects all claim amendments and replaces all prior versions, and listings, of claims in the application. Material to be inserted is in **bold and underline**, and material to be deleted is in ~~strikeout~~ or (if the deletion is of five or fewer consecutive characters or would be difficult to see) in double brackets [[]].

Claims 1-3 (Canceled).

Claim 4 (Currently amended). **A Geneva mechanism for providing intermittent motion, comprising:**

a drive gear adapted to receive rotational input, the drive gear having a drive cam structure and a set of drive teeth, the drive cam structure including a cam recess region-and a drive cam-bearing surface; and

a driven gear having a driven cam structure and a set of driven teeth, wherein the driven cam structure includes at least two bearing surface regions and a cam lobe portion;

wherein the driven cam structure is adapted to engage the drive cam structure and align the set of drive teeth with the set of driven teeth to position the set of drive teeth to engage the set of driven teeth for selective transmission of the rotational input; wherein the driven gear has an engaged configuration, in which the driven teeth engage the drive teeth to cause the driven gear to counter rotate relative to the drive gear, and further wherein the driven gear has at least two non-rotating configurations, in which the drive cam structure and the driven cam structure are adapted to prevent the driven gear from rotating;

wherein, when the gear system is in the engaged configuration, the cam lobe portion engages the cam recess region and aligns the drive teeth and the driven teeth for rotational engagement, and further wherein, when the gear system is in either of the non-rotating configurations, one of the bearing surface regions slides along the drive cam-bearing surface forming a contact area as the drive gear rotates, preventing the driven gear from rotating; and

wherein the cam recess region includes alignment guide surfaces adapted to guide the cam lobe portion into the cam recess and align the drive teeth and the driven teeth for engagement, and further The gear system of claim 3, wherein the cam recess region includes extended drive teeth formed by a portion of the set of drive teeth, which are longer axially than a remaining portion of drive teeth of the set.

Claims 5-6 (Canceled).

Claim 7 (Currently amended). A Geneva mechanism for providing intermittent motion, comprising:

a drive gear adapted to receive rotational input, the drive gear having a drive cam structure and a set of drive teeth, the drive cam structure including a cam recess region and a drive cam-bearing surface; and

a driven gear having a driven cam structure and a set of driven teeth, wherein the driven cam structure includes at least two bearing surface regions and a cam lobe portion;

wherein the driven cam structure is adapted to engage the drive cam structure and align the set of drive teeth with the set of driven teeth to position the set of drive teeth to engage the set of driven teeth for selective transmission

of the rotational input; wherein the driven gear has an engaged configuration, in which the driven teeth engage the drive teeth to cause the driven gear to counter rotate relative to the drive gear, and further wherein the driven gear has at least two non-rotating configurations, in which the drive cam structure and the driven cam structure are adapted to prevent the driven gear from rotating;

wherein, when the gear system is in the engaged configuration, the cam lobe portion engages the cam recess region and aligns the drive teeth and the driven teeth for rotational engagement, and further wherein, when the gear system is in either of the non-rotating configurations, one of the bearing surface regions slides along the drive cam-bearing surface forming a contact area as the drive gear rotates, preventing the driven gear from rotating; and

The gear system of claim 2, wherein the cam lobe portion includes a set of cam lobe teeth formed from a portion of the set of driven teeth, which extend axially from a remaining portion of driven teeth of the set.

Claims 8-34 (Canceled).

Claim 35 (Previously presented). A gear system for providing intermittent motion, comprising:

a drive gear adapted to receive rotational input, the drive gear having a drive cam structure and a set of drive teeth including a portion of extended drive teeth which are longer axially than a remaining portion of teeth of the set; and

a driven gear having a driven cam structure and a set of driven teeth; wherein the driven gear and the drive gear are operatively associated for selective transmission of the rotational input; wherein the driven gear has an engaged orientation, in which the

drive teeth engage the driven teeth to cause the driven gear to counter rotate relative to the drive gear; and further wherein the driven gear has at least two non-rotating orientations, in which the drive cam structure and the driven cam structure are adapted to prevent the driven gear from rotating.

Claim 36 (Previously presented). The gear system of claim 35, wherein the drive cam structure includes a cam recess region and a drive cam-bearing surface, and wherein the driven cam structure includes at least two bearing surface regions and a cam lobe portion, wherein when the gear system is in the engaged orientation the cam lobe portion engages the cam recess region and aligns the drive teeth and the driven teeth for rotational engagement, and further wherein when the gear system is in either of the non-rotating orientations one of the bearing surface regions slides along the drive cam-bearing surface forming a contact area as the drive gear rotates, preventing the driven gear from rotating.

Claim 37 (Previously presented). The gear system of claim 36, wherein the cam recess region includes alignment guide surfaces adapted to guide the cam lobe portion into the cam recess region and align the drive teeth and the driven teeth for engagement.

Claim 38 (Previously presented). The gear system of claim 37, wherein the cam recess region includes the extended drive teeth formed by a portion of the set of drive teeth, which are longer axially than a remaining portion of drive teeth of the set.

Claim 39 (Previously presented). The gear system of claim 36, wherein the drive cam-bearing surface includes a surface extension region adapted to increase the

contact area between the drive cam-bearing surface and one of the bearing surface regions.

Claim 40 (Previously presented). The gear system of claim 39, wherein the surface extension region is an axially upstanding arcuate perimeter rim.

Claim 41 (Previously presented). The gear system of claim 36, wherein the cam lobe portion includes a set of cam lobe teeth formed from a portion of the set of driven teeth, which extend axially from a remaining portion of driven teeth of the set.

Claim 42 (Previously presented). The gear system of claim 36, wherein the drive cam structure includes a perimeter flange adapted to axially align the drive gear and the driven gear.

Claim 43 (Previously presented). The gear system of claim 42, wherein the perimeter flange includes the drive cam-bearing surface.

Claim 44 (Previously presented). The gear system of claim 43, wherein the cam lobe portion is adapted to slidably engage the drive cam-bearing surface on the perimeter flange when the gear system is in either of the non-rotating orientations.

Claim 45 (Previously presented). The gear system of claim 36, further comprising an axial alignment structure attached to at least one of the drive gear and driven gear and configured to extend at least partially over the other of the drive gear and driven gear.

Claim 46 (Previously presented). The gear system of claim 45, wherein the axial alignment structure includes a disk.

Claim 47 (Previously presented). The gear system of claim 36, wherein at least one of the drive gear and driven gear is plastic.

Claim 48 (Previously presented). A gear system for providing intermittent motion, the system comprising:

a drive gear having a set of drive teeth including a portion of extended drive teeth that are longer axially than a remaining portion of teeth of the set, and a means to selectively engage a set of driven teeth on a corresponding driven gear;

a driven gear having a set of driven teeth and a means to align the set of driven teeth with the set of drive teeth of the drive gear; and

at least two rotation locking means for preventing the driven gear from rotating in response to a rotation of the drive gear.

Claims 49-52 (Canceled).

Claim 53 (Currently amended). A gear system for providing intermittent motion, comprising:

a drive gear adapted to receive rotational input, the drive gear having a drive cam structure and a set of drive teeth, the drive cam structure including a cam recess region that includes a bearing surface; and

a driven gear having a driven cam structure and a set of driven teeth, the driven cam structure including a cam lobe portion that includes a bearing surface configured to engage the cam recess bearing surface upon engagement of the drive teeth and the driven teeth; wherein the driven gear and the drive gear are operatively associated for selective transmission of the rotational input; wherein the driven gear has an engaged orientation, in which the drive teeth engage the driven teeth to cause the driven gear to counter rotate relative to the drive gear, and further wherein the driven gear has at least two non-rotating orientations, in

which the drive cam structure and the driven cam structure are adapted to prevent the driven gear from rotating The gear system of claim 49, wherein the cam lobe portion includes a set of cam lobe teeth formed from a portion of the set of driven teeth, which extend axially from a remaining portion of driven teeth of the set.

Claims 54-59 (Canceled).